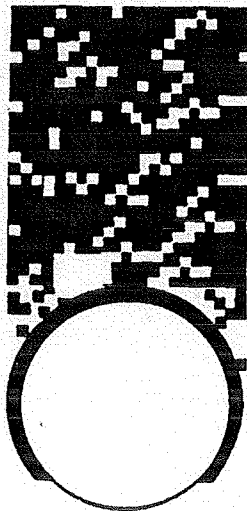


DRAFT REPORT

*S***trategic** *R***egional** *A***rterial**

Illinois Route 47
from US Route 30 (Base Line Road) to
Price Road (Illinois Route 173
SRA Alternative Alignment)



**Operation
GreenLight**

**Illinois Department of Transportation
March, 1995**

FOREWORD

Illinois Route 47 is designated as a Strategic Regional Arterial (SRA) from the Kane/Kendall County Line at US Route 30 (Base Line Road), south of Sugar Grove, to the Illinois Route 173 SRA alternative alignment along Price Road, south of Hebron.

This SRA Report has been prepared for the Illinois Department of Transportation (IDOT) and the SRA Subcommittee of the Chicago Area Transportation Study (CATS) by Meridian Engineers & Planners, Inc.

The Illinois Route 47 SRA is intended to function as part of a regional arterial system. It, along with other SRA routes and the regional expressway and transit systems, will provide a network to carry high volumes of long-distance traffic. This report is one element of a long-range plan for all routes in the SRA network. Together, the route studies constitute a comprehensive, coordinated plan for the entire SRA network.

Included in this report are a description of the SRA study objectives and process, a detailed explanation and analysis of the existing route conditions, recommendations for improvements, and documentation of the process including comments received.

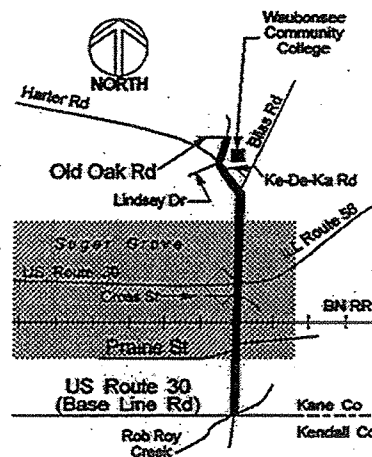
Information regarding the study and this report are available from the Illinois Department of Transportation, through the SRA Project Manager - Mr. Rich Starr, 708/705-4095.

EXECUTIVE SUMMARY

SRA studies have resulted in specific segment recommendations for this route's thirteen segments.

Segment 1: US Route 30 (Base Line Road) to Prairie Street (east)

- Develop four 12 ft. through lanes, a grass median, shoulders, and open drainage in a right-of-way expanded to 160 ft.
- Provide single left and right turn lanes at US Route 30.
- Manage access with median breaks at 1/2 mile spacing between Jericho Road and Prairie Street (east), other access right in/right out only.
- Replace structure over Rob Roy Creek with two structures.
- Accommodate a park-and-ride facility at US Route 30.



Segment 2: Prairie Street (east) to Old Oak Road

- Develop four 12 ft. through lanes, a raised median, curb and gutter, and closed drainage from Prairie Street to Bliss Road. The right-of-way between Prairie Street and Illinois Route 56 will be expanded to 120 ft. From Illinois Route 56 to Bliss Road, the existing 180 to 230 ft. right-of-way will be maintained.
- Develop four 12 ft. through lanes, a grass median, shoulders, and open drainage in the existing 200 to 230 ft. right-of-way from Bliss Road to Old Oak Road.
- Provide signals at Prairie Street (east), Illinois Route 56 SB to EB ramp, Bliss Road, and the future Waubensee Community College access at Lindsey Drive.
- Manage access with median breaks at two locations, other access right in/right out only.
- Replace the BN RR structure.
- Provide WB to NB ramp and standard geometry and structural clearance at Illinois Route 56.
- Accommodate a Metra station and park-and-ride facility in Elburn.
- Coordinate bike linkages at Waubensee Community College with existing bike paths.

ORGANIZATION OF REPORT

This report on the Illinois Route 47 SRA route study is divided into five chapters:

Chapter One. Introduction, provides information about the SRA system and Operation GreenLight, SRA route types, study objectives, the study process, desirable route characteristics, and the study data sources and methodologies.

Chapter Two. Route Overview, presents a general description of the SRA corridor including land use/developmental characteristics, regional transportation facilities, route area and design characteristics, projected travel demand, and roadway/right-of-way general discussion.

Chapter Three. Summary of SRA Corridor Recommendations, presents a summary of existing route characteristics and recommended route improvements.

Chapter Four. Corridor Analysis by Segment, presents a detailed analysis of existing route characteristics and recommended route improvements by segment.

<u>Section</u>	<u>Route Segments</u>
Section 4.1	1: Illinois Route 47 from US Route 30 to Prairie Street (east)
Section 4.2	2: Illinois Route 47 from Prairie Street (east) to Old Oak Road
Section 4.3	3: Illinois Route 47 from Old Oak Road to Alternative Alignment (Hughes Road)
Section 4.4	4: Alternative Alignment from Hughes Road to Old Illinois Route 47
Section 4.5	5: Illinois Route 47 from Old Illinois Route 47 to Woolley Road
Section 4.6	6: Illinois Route 47 from Woolley Road to North of Lily Lake Cemetery
Section 4.7	7: Illinois Route 47 from North of Lily Lake Cemetery to US Route 20 (east)
Section 4.8	8: Illinois Route 47 from US Route 20 (east) to Kreutzer Road
Section 4.9	9: Illinois Route 47 from Kreutzer Road to Reed Road
Section 4.10	10: Illinois Route 47 from Reed Road to US Route 14
Section 4.11	11: Illinois Route 47 from US Route 14 to Ware Road
Section 4.12	12: Illinois Route 47 from Ware Road to Raycraft Road
Section 4.13	13: Illinois Route 47 from Raycraft Road to Price Road (Illinois Route 173 Alternative Alignment)

For each route segment, these analyses are presented:

Existing Facility Characteristics. The existing facility characteristics include the existing right-of-way and roadway characteristics, location of existing traffic signals and existing structures, and existing transit usage and routes.

Existing Environmental Characteristics. The existing environmental characteristics of the route include existing streams, wetlands and floodplains, historic buildings and districts, hazardous waste and leaking underground storage tanks (LUST) sites, threatened or endangered species, and other environmental characteristics.

Existing Land Use/Development Characteristics. The existing land use characteristics are examined with respect to the types, density or intensity of use, constraints and access locations. Future development potential is examined by identification of vacant land, and planned or likely development or redevelopment in the vicinity. Public and institutional areas are identified by location and type.

Recommended Improvements. The recommended improvements for each route segment are discussed. Short term/low-cost and ultimate (post 2010) improvements as well as right-of-way requirements, potential environmental and land use considerations, and cost estimates relating to construction of the recommended improvements and acquisition of right-of-way are given.

Chapter Five. Public Involvement, summarizes the public involvement process during the study, including the Illinois Route 47 SRA Advisory Panel Meetings, the Advisory Panel Newsletters, the Public Hearing and other efforts to promote local involvement in the study process.

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GLOSSARY

ADID - Advanced Identified Wetland

ADT - Average Daily Traffic

AVE - Avenue

BN - Burlington Northern (Railroad)

CAAA - Clean Air Act Amendments of 1990

CATS - Chicago Area Transportation Study

CC - Chicago Central (Railroad)

CERCLIS - Comprehensive Environmental Response Compensation
and Liability Act Information System

CH - County Highway

CNW - Chicago and Northwestern (Railroad)

CO - County

COMM - Community

CR - Creek

CT - Court

DEPT - Department

DR - Drive

E/EB - East/Eastbound

EIS - Environmental Impact Statement

ELEM - Elementary

ETRP - Employee Trip Reduction Program

FEMA - Federal Emergency Management Agency

FT - Feet

GC - Golf Course

HOV - High Occupancy Vehicle

HS - High School

I - Interstate

IB - Inbound

IDOC - Illinois Department of Conservation

IDOT - Illinois Department of Transportation

ILL - Illinois

ISTEA - Intermodal Surface Transportation Efficiency Act of 1991

ISTHA - Illinois State Toll Highway Authority

JR - Junior

LN - Lane

LOS - Level of Service

LUST - Leaking Underground Storage Tank

N/NB - North/Northbound

N/A - Not Applicable

NHS - National Highway System

NIPC - Northeastern Illinois Planning Commission

NO - Number

OB - Outbound

PKWY - Parkway

RD - Road

ROW - Right-of-Way

RR - Railroad

RTA - Regional Transportation Authority

S/SB - South/Southbound

SN - Structure Number

SOO - Soo Line (Railroad)

SRA - Strategic Regional Arterial

ST - Street

ST. - Saint

TR - Trail

TRNPK - Turnpike

USEPA - United States Environmental Protection Agency

VPD - Vehicles per Day

W/WB - West/Westbound

WCC - Waubensee Community College

2010 TSD PLAN - Year 2010 Transportation System Development Plan
for the Northeast Illinois Region.

CHAPTER ONE: INTRODUCTION

1.1 The Strategic Regional Arterial System and Operation GreenLight

The Strategic Regional Arterial (SRA) system is a 1,340 mile network of existing roads in Northeastern Illinois. The system includes 146 route segments in Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will Counties (See Figure 1.1.1). As part of the 2010 Transportation System Development Plan (2010 TSD Plan) adopted by the Chicago Area Transportation Study (CATS) and Northeastern Illinois Planning Commission (NIPC), the SRA system is intended to supplement the existing and proposed expressway system by accommodating a significant portion of long-distance, high-volume automobile and commercial vehicle traffic in the region. Many of the roads in the SRA system, including Illinois Route 47, are already on the arterial highway network of the Illinois Department of Transportation (IDOT) and now carry high volumes of long-distance traffic.

According to forecasts prepared by CATS, travel in the year 2010 in Northeastern Illinois is expected to increase by 25 percent over 1980 levels. In the last few years, rapid economic development and growing population have resulted in significant increases in congestion on the regional expressway system, as well as on arterial and local roads in many parts of the region. Creation of the SRA system is a major component of Operation GreenLight, an eight-point plan to deal with urban congestion and improve regional mobility. The plan was developed by IDOT in cooperation with the Illinois State Toll Highway Authority (ISTHA), CATS, NIPC, and the Regional Transportation Authority (RTA). In addition to creating the SRA network, Operation GreenLight addresses these major transportation issues:

- Developing Major Transit/Highway Facilities
- Improving Other Key Arterial Roadways
- Identifying Strategic Transit Improvements
- Reducing Demand for Highway Use
- Increasing Environmental Consideration
- Improving Freeway Traffic Management
- Improving Arterial Traffic Management

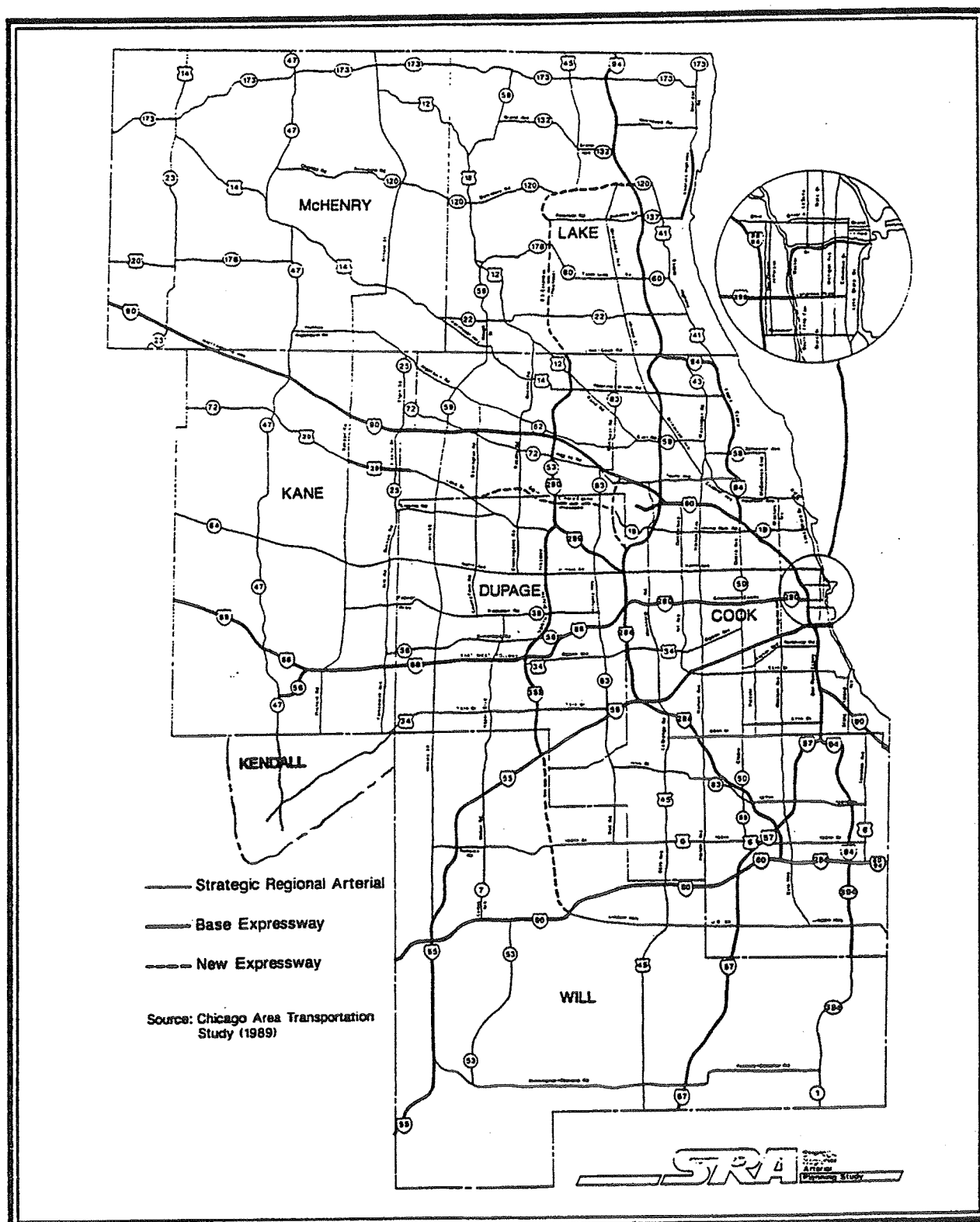


Figure 1.1.1
Illinois Route 47

THE STRATEGIC REGIONAL ARTERIAL SYSTEM

Together, the components of Operation GreenLight are a blueprint for an overall approach to improve transportation in Northeastern Illinois. As part of this comprehensive approach, the SRA system is designed to improve regional mobility by providing a comprehensive network of arterial routes to carry significant volumes of long-distance traffic across the region, complementing the regional transit and highway facilities by providing access for regional trips on these facilities, and providing for long-distance travel to supplement the regional expressway system.

1.2 SRA Route Types

Within the SRA network there are significant differences in the roadway environment. These differences will determine how the various routes may function in the system. Three different types of SRA routes have been designated, corresponding to varying roadway environment:

- Urban Routes
- Suburban Routes
- Rural Routes

The designation of route types is based upon the projected 2010 density of development with the Chicago region. Illinois Route 47 is designated as a SRA corridor from US Route 30 (Base Line Road) in Kane County to Price Road (Illinois Route 173 Alternative Alignment) in McHenry County. Using various analyses in this study, this corridor is classified as rural for its entire length. (See Figure 1.2.1).

Urban SRA routes are located in the City of Chicago and adjacent portions of more densely developed suburbs such as Oak Park, where projected densities are greater than 5.0 households per acre. Suburban SRA route designations, where projected densities are between 0.5 and 5.0 households per acre, apply to suburban Cook and Lake Counties, all of DuPage County, and the more developed portions of Lake, Kane, McHenry, and Will Counties. Rural SRA routes are located in the outer portions of Lake, Kane, McHenry, Will, and northeastern Kendall Counties, where projected densities are less than 0.5 households per acre.

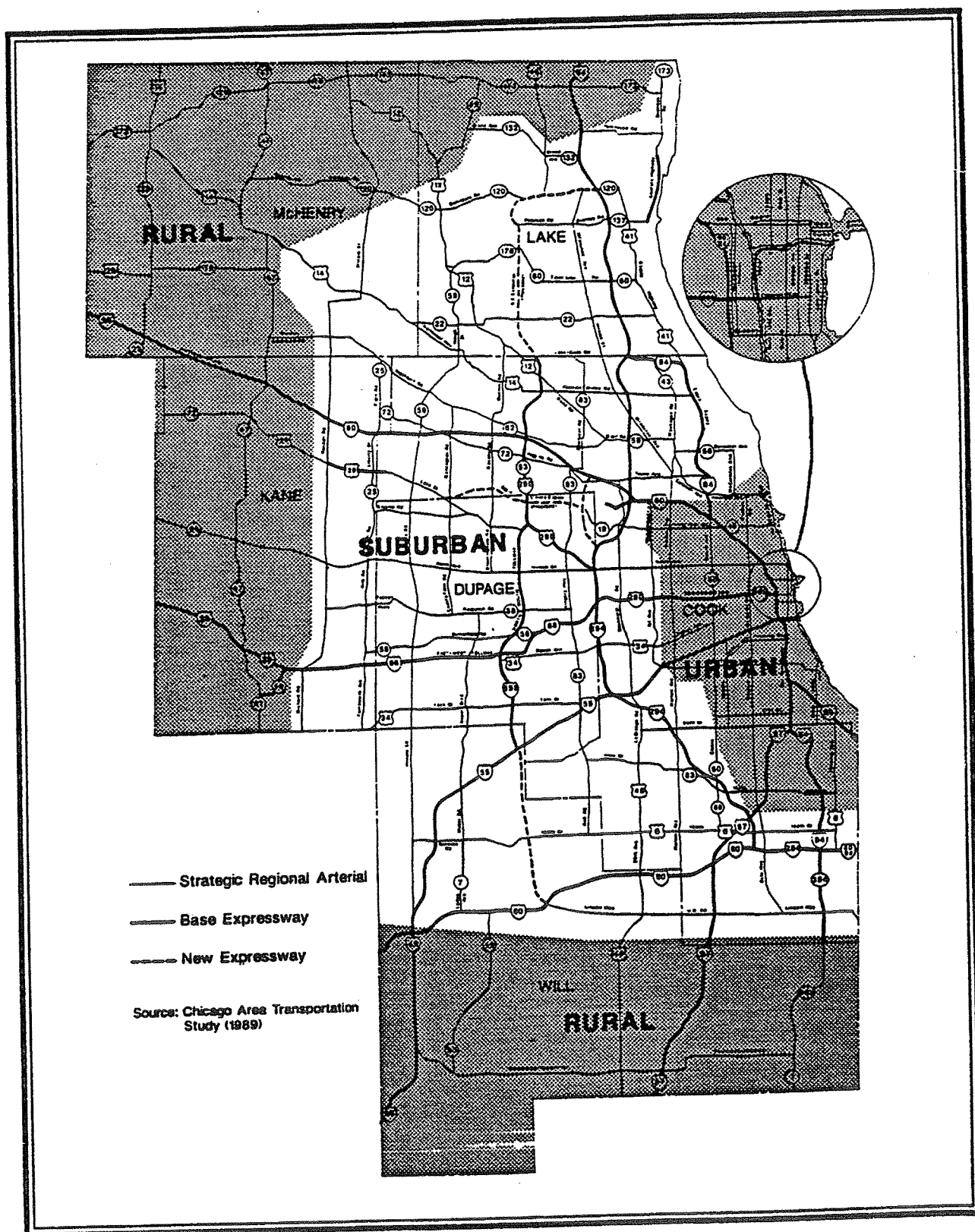


Figure 1.2.1
 Illinois Route 47

SRA ROUTE TYPES

SRA routes located in densely urbanized areas typically are existing routes with limited possibilities for roadway expansion, but where improvements could be made to intersections, transit facilities, and structural clearances. For routes in developing suburban areas, additional lanes on roadways, new connections to improve route continuity, and operational improvements such as signal coordination may be considered. In rural areas, right-of-way preservation and access control would provide for improved movements of through traffic and accommodate future needs.

1.3 Study Objectives

As an SRA route, Illinois Route 47 is intended to function as part of a regional arterial system, carrying high volumes of long-distance traffic in conjunction with other SRA routes and the regional expressway and transit systems. To implement the SRA system, development of a comprehensive, long-range plan for the entire network is necessary. The planning process for the SRA system is to be accomplished over a five year period, with individual route studies comprising one-fifth of the total system to be undertaken each year. The Illinois Route 47 study occurred from March 1992 to July 1995. Together, the route studies constitute a comprehensive, coordinated plan for the entire SRA network.

The Illinois Route 47 study identifies both short-range and long-range improvements to enable the route to function as part of the SRA system. These objectives guide the study process:

- Determine the types of roadway improvements needed for each route including additional lanes, signalization and interchanges.
- Define right-of-way requirements.
- Identify ways to enhance access to the regional transit system.
- Identify access management to improve through traffic movement and reduce conflicts.
- Coordinate recommended route improvements with projected development.
- Identify necessary improvements to accommodate commercial traffic.
- Identify ways to accommodate bicycle and pedestrian travel.
- Identify potential environmental concerns.

This completed study can be used by local and State agencies to help guide implementation of improvements on Illinois Route 47, so that individual public or private projects are consistent with the coordinated long-range development of the route as an integral part of the SRA system in northeastern Illinois.

The development of a land use plan that gives appropriate recognition to the SRA recommendations is encouraged. However, since it is desirable that such plan amendment be adopted by the land use planning authority along each respective segment of the SRA system, the process for development of such land use plans should be distinctively intergovernmental in nature. While this intergovernmental planning effort should be encouraged, nothing inherent or implied in the SRA recommendations is intended to supplant the independent decision-making of local land use authorities.

1.4 The SRA Study Process

The SRA planning study process is accomplished through six phases:

Phase 1 - Data Collection/Evaluation. The study process is designed to efficiently use available data for each route. This data is assembled from numerous sources and includes, among others, right-of-way information, roadway plans, traffic volume counts, transit information, bicycle usage, adjacent development characteristics, accident data, and environmental and related studies. The data is evaluated to establish current conditions, constraints and improvement needs.

Phase 2 - Route Analysis. Possible improvements for the SRA route are determined by incorporating the recommended design features and, where necessary, accommodating local conditions or constraints. Improvements are identified as recommended, short term/low-cost, or ultimate (post 2010).

Phase 3 - Environmental Issues/Screening. The SRA study involves a screening process that identifies notable, important, or sensitive environmental resources, areas, or systems along each route. The SRA planning process does not include detailed environmental assessments or analysis of specific mitigation measures. The results of the screening process are used to evaluate improvement alternatives and serve as an early indicator of environmental issues for future studies and design.

Phase 4 - Cost Estimates/ Identification of Right-of-Way Needs. A cost estimate, including right-of-way needs and costs, for recommended and short term/low-cost improvements is prepared for each segment of the route.

Phase 5 - Involvement and Coordination. Throughout the SRA route planning process, the involvement of local and regional agencies is an important consideration. The initial data collection includes solicitation of data and a questionnaire from each unit of government along the route. Information and coordination efforts include forming Advisory Panels for each SRA route which work with IDOT and members of the study team during the planning process. A regular newsletter for each Panel informs members about the SRA program and ongoing route studies. A public hearing in an open house format is also conducted in each County in which the route is found.

Phase 6 - Route Improvement Plan/Report. As the final step in the initial route planning process, a report for each SRA route documents the study findings and recommended improvements.

1.5 Desirable Route Characteristics and Techniques for Special Circumstances

Desirable route characteristics for the Year 2010 have been delineated for each of the three SRA route types - Urban, Suburban, and Rural - related to the roadway environment. These desirable characteristics are intended to provide adequate traffic service and geometric design, serving as criteria for planning the individual SRA routes.

As planning criteria, these design features and other route characteristics are designed to be generally applicable to all SRA routes in each type. However, the SRA planning process recognizes that there may be situations along SRA routes where certain design features are not appropriate or where special treatment of some features is desirable, such as

- Bus lane/high occupancy vehicle (HOV) lanes
- Signal preemption capability for transit vehicles
- Demand actuated signals at transit stations
- Channelization or interchanges at high volume intersections
- Use of continuous two-way left turn lanes
- Designation of route bypasses for constricted areas
- Location of transit, pedestrian, or bicycle facilities in or adjacent to the right-of-way.

While not all of these special techniques may be applicable to the Illinois Route 47 SRA, they illustrate the range of treatments that have been considered during the study.

A full description of the recommended designs and features applicable to all SRA routes, and techniques for special circumstances can be found in the revised version of the "Strategic Regional Arterial Design Concept Report", dated February 1994. This document is available from IDOT and CATS.

1.6 Study Data Sources and Methodologies

Existing Roadway Characteristics. Several data sources were compiled to create route inventories. Traffic counts for selected major intersections were obtained from IDOT Traffic Volume Maps and 1990 IDOT Intersection Turning Movement Data. The route was photographed using a video camera from a helicopter. On-site inspection confirmed IDOT scoping report data that included pavement width; number of lanes and turn bays; location of traffic signals, sidewalks, frontage roads and structures; type of median and access; and speed limits. Pavement widths were further confirmed with construction plans.

Existing Transit Characteristics. The transit data is from Metra and Pace. Both agencies provided the "Future Agenda for Suburban Transportation" that was used for the Metra boardings, station parking information, and proposed Metra future improvements. Some information for Metra future improvements also came from its "Wisconsin Central Corridor Commuter Rail Service Project Proposal". Pace provided the "Quarterly Route Review: January - March 1992" that was used for Pace bus ridership. Also, individual Metra line and Pace bus route timetables were used to identify the locations of the facilities and frequency of service. In addition, CATS and NIPC provided the 2010 TSD Plan that was used to define other planned and proposed transit improvements throughout the corridor.

Land Use/Development Characteristics. Current land use/development characteristics were included in the route inventory and derived from NIPC aerial photography, documents from local communities, the video photography, and on-site inspection. These uses were identified in some detail and later grouped into more general developmental categories such as residential, commercial, industrial, public and semi-public. This information was used to assess potential integration of route concepts with land use and access needs.

The analysis of sensitive land uses includes several unique land uses: schools, places of worship, theaters, auditoriums, parks, cemeteries, recreation facilities, nature and forest preserves, hospitals, nursing homes, and hotels.

Environmental Considerations. The objective of this aspect of the study was to identify all environmental resources that could be impacted by improvements to the SRA route. Numerous public and private entities were contacted to determine locations of wetlands, 100-year floodplains, natural areas and parks, prime farmland, threatened or endangered species habitats, historical sites, and hazardous waste or LUST sites. These agencies were also asked to identify land uses that might be sensitive to the effects of highway construction or changes in air quality and ambient noise levels.

The approximate locations of all environmental resources and sensitive receptors are plotted on the aerial photos included in this report. However, no representation is made regarding the accuracy of information received from governmental agencies concerning chemical releases, wetland limits, or threatened or endangered species habitat, since no field verification of such sites was performed. Such determinations are aspects of detailed Phase I Studies.

Year 2010 Traffic Demand Projections. CATS has projected the Year 2010 traffic for all routes in the SRA system, and for tollways and expressways. These projections assume that all routes have been improved to the standards in the SRA Design Concept Report (e.g., four or six lanes). This assumption tries to provide that no one route or part of a route would be expected to handle more than its share of the expected 2010 traffic volumes that may be traveling in that general direction. It also tries to provide that no part of a route would be improved more than is necessary to provide a consistent level of service throughout the route. The 2010 traffic projections are expressed in thousands of vehicles per day (vpd).

Roadway Capacity Estimates. Capacity analyses estimate the number of vehicles that can be carried on an SRA route. Critical factors that affect capacity include the number of signals and distance between them, the number of through lanes, the posted speed, percentage of conflicting vehicle turning movements and the characteristics of rush hour traffic. Results of capacity analyses are usually expressed in terms of Level of Service (LOS). Level of Service is a measure of performance for roadway facilities and relies most heavily on the number of vehicles that can be accommodated at signalized intersections.

Level of Service is expressed in grades A through F, much like an academic report card. LOS A implies free flow at average travel speeds and very low intersection delay. LOS C represents stable flow, more restricted ability to maneuver, lower average travel speeds and moderate intersection delay. LOS E is characterized by significant intersection delay and travel speeds at or below 1/3 of free flow speeds. LOS F is unacceptable congestion. Levels B and D express intermediate service levels between A and C and between C and E, respectively.

Planning level capacity analyses will be performed for all route segments, and at major intersections. Major intersections include those with other SRA routes, State and US routes, and cross streets with an anticipated annual average daily traffic (ADT) of greater than 20,000 vpd. Analysis results will be used to verify the laneage needs proposed for each SRA route.

Corridor Planning. A review of adopted municipal and regional land use transportation plans were performed to identify the new facilities that would impact the SRA, the particular deficiencies that can be addressed by the SRA, and any potential inconsistencies between adopted plans and SRA planning.

Cost Estimates. The cost estimates, an opinion of probable costs, were developed to give IDOT and other involved agencies an idea of the investment necessary for the SRA routes. The planning level cost estimates were defined by using historical figures from IDOT.

CHAPTER TWO: ROUTE OVERVIEW

2.1 Study Area

The Illinois Route 47 study area extends north from the Kane\Kendall County Line at US Route 30 (Base Line Road) to Price Road (the Illinois Route 173 SRA alternative alignment) in McHenry County (See Figure 2.1.1.). This corridor is approximately 55 miles in length and is located in Kane and McHenry Counties. Municipalities adjacent to the SRA corridor include:

Sugar Grove
Elburn
Lily Lake
Starks

Huntley
Woodstock
Hebron

The Illinois Route 47 SRA study has been extended to Illinois Route 71 in Kendall County. However, this portion of the study extends from US Route 30 to Price Road. The extension from US Route 30 to Illinois Route 71 is included in the 6th subnetwork of the SRA routes.

2.2 Land Use/Development Characteristics

As the Chicago metropolitan area expands in the direction of this corridor, population growth is expected in the area.

The Illinois Route 47 corridor is generally composed of agricultural land, except for the area around the villages and cities, where single-family residential and commercial uses are predominant. Other significant land uses include: schools and colleges, such as Waubensee Community College and Lily Lake Elementary School; churches, such as St. Peter's Lutheran Church; parks and bike trails, such as Deicke Park and the Great Western Bike Trail; cemeteries, such as the Lily Lake Cemetery; golf courses, such as Crystal Woods Golf Course; and community buildings, such as the McHenry County Courthouse and the Campton Township Highway Department.

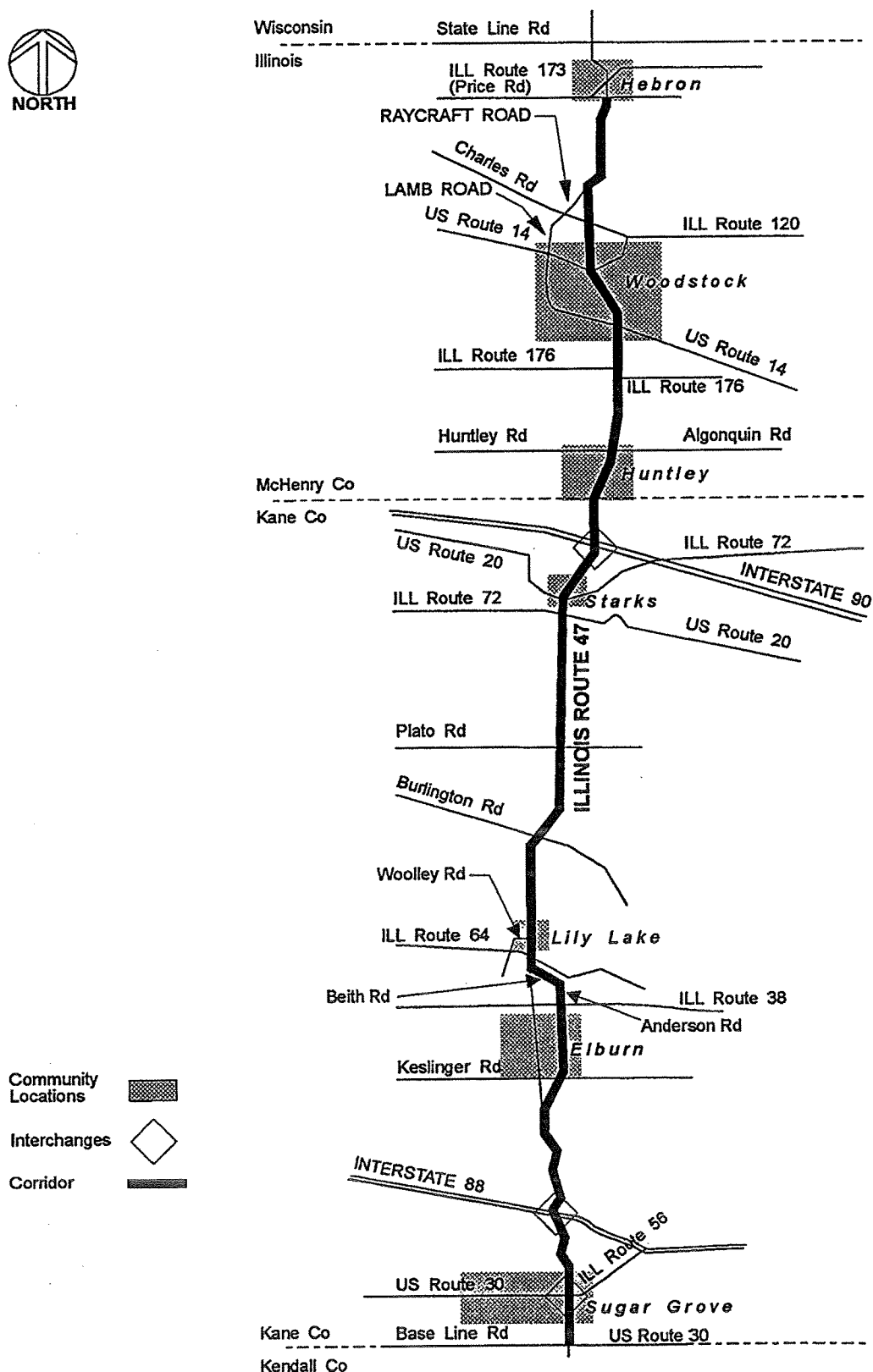


Figure 2.1.1
Illinois Route 47

CORRIDOR MAP

2.3 Regional Transportation Facilities

Figure 2.3.1 indicates the existing and proposed roadway and transit facilities connecting Illinois Route 47 to the regional transportation system as defined in the 2010 TSD Plan, prepared by CATS.

Portions of the Illinois Route 47 corridor are served by two modes of public transportation: commuter rail and bus. The Chicago and Northwestern/ Northwest Line crosses Illinois Route 47. The SRA corridor is also served by Pace Bus Routes 531, 807, and 808.

Two interstate highway facilities cross this study corridor. Interstate 88, near the south end of the corridor, provides east/west access to the Chicago metropolitan area. Interstate 90, in the central portion of the corridor, provides east/west access to the Chicago metropolitan and the O'Hare Airport area. Other major east/west routes that intersect the Illinois Route 47 corridor are US Route 30 and Illinois Route 56 in Sugar Grove, Illinois Route 38 in Elburn, Illinois Route 64 in Lily Lake, US Route 20 and Illinois Route 72 in Starks, Illinois Route 176 south of Woodstock, US Route 14 and Illinois Route 120 in Woodstock, and Illinois Route 173 (alternative alignment) in Hebron. Eight of these routes are SRA routes: US Route 30, Illinois Route 64, US Route 20, Illinois Route 72, Illinois Route 176, US Route 14, Illinois Route 120, and Illinois Route 173. Huntley Algonquin Road is also an SRA route.

The Year 2010 TSD Plan was reviewed for major regional highways that are being planned. There are no specific projects planned that impact or cross Illinois Route 47.

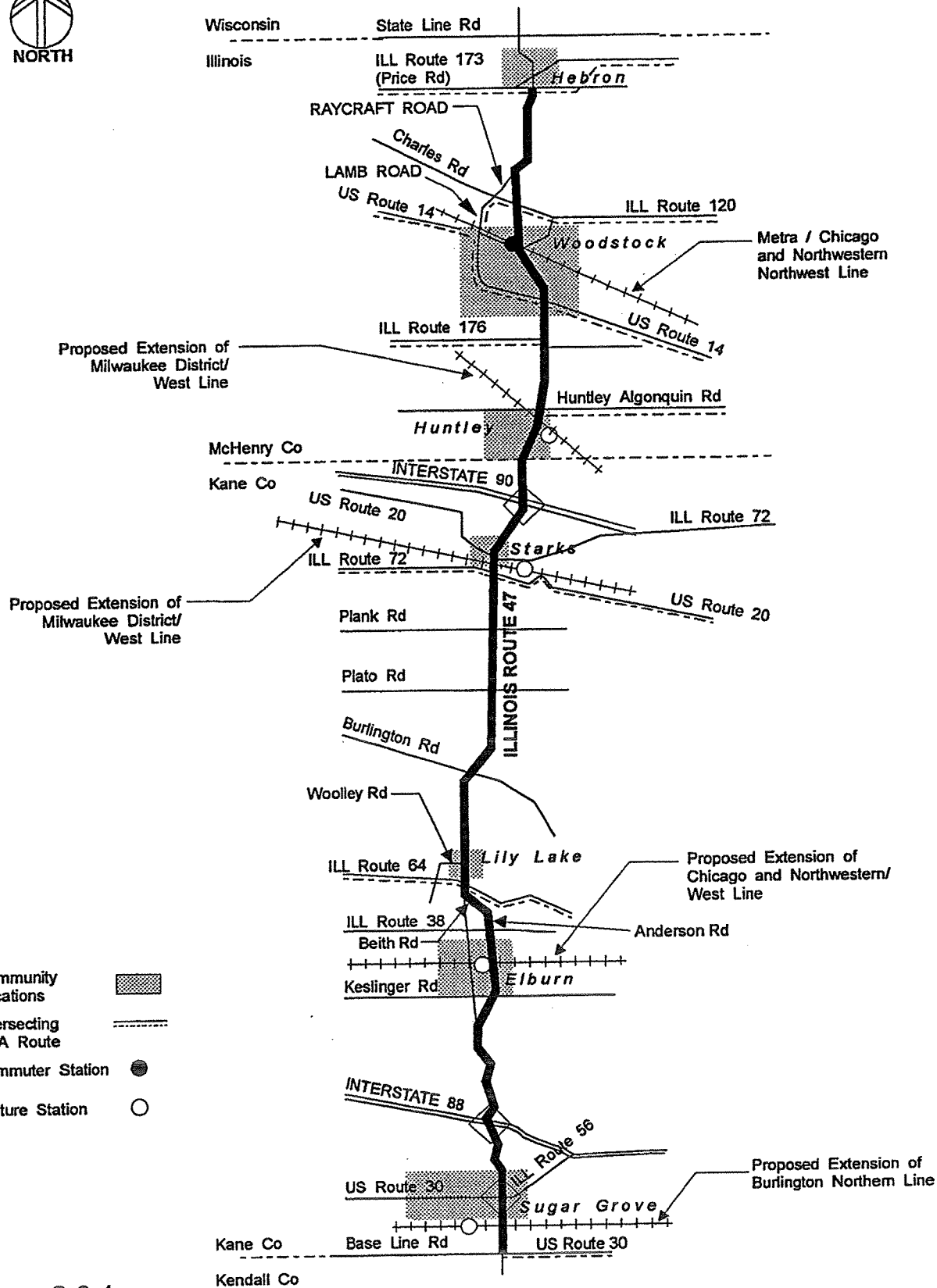


Figure 2.3.1
Illinois Route 47

TRANSPORTATION FACILITIES

Several Phase I studies are underway in this corridor.

Table 2.3.1: Phase I Projects Along the Corridor

Project	Project Limits	Scope of Work
US Route 30	Illinois Route 47 to Orchard Avenue	Patching
Illinois Route 47	Main Street to Cross Street in Sugar Grove	Intersection Improvements, Rehabilitation (Widening and Resurfacing)
Illinois Route 56	Illinois Route 47 to Interstate 88 in Sugar Grove	Maintenance Resurfacing
West Galena Road	Illinois Route 47 to Illinois Route 56 in Sugar Grove	Widening and Resurfacing
Illinois Route 47	Over Blackberry Creek	Bridge Rehabilitation
Illinois Route 47	Finley Road to Seavey Road	Patching
Illinois Route 47	Keslinger Road in Elburn	Intersection Improvements
Keslinger Road	In Elburn	Widening to 3-12 ft. lanes w/ 8' shoulders
Illinois Route 47	US Route 20 (east) to Illinois Route 72 (west) in Starks	Resurfacing (3R)
Illinois Route 47	Huntley Algonquin Road to Conley Road in Huntley	Resurfacing
US Route 14	Lake Avenue to Illinois Route 120 and at Illinois Route 47 in Woodstock	Widening and Resurfacing, Bridge, Intersection Improvements
Lake Avenue	Illinois Route 47 to US Route 14 in Woodstock	Maintenance Resurfacing
Illinois Route 120	Illinois Route 47 to Illinois Route 31 in Woodstock	Resurfacing (II)

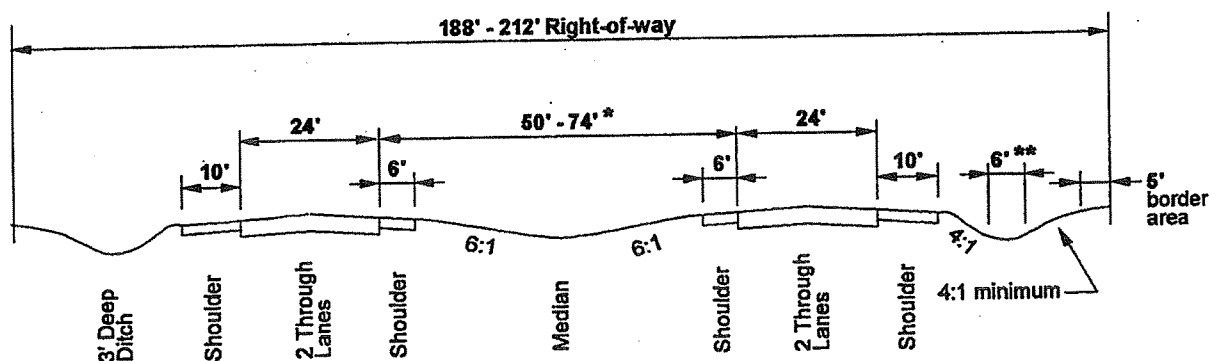
2.4 Route Area Designation and Design Characteristics

The route is classified as rural for its entire length. Table 2.4.1 lists the desirable characteristics for rural SRA routes in the Year 2010, including typical geometrics, operational measures, level of service, and access policies. A typical roadway cross section is shown in Figure 2.4.1.

Table 2.4.1: Desirable Rural Route Characteristics
(Source: SRA Design Concept Report)

Right-of-Way Width	188' - 212'
Level of Service(Peak Hour)/ Design Speed	C/ 60 mph
Number of Through Lanes	2 in each direction, 12' width; with provision for future expansion to 6 total lanes.
Median Width	50' - 74'
Right Turns	Turn lanes at major cross streets.
Left Turns	Turn lanes at all intersections.
Shoulders	Right - 10' paved; Left - 6' paved
Curbs	No
Sidewalks	If needed, along outside of frontage roads.
Bicycle Accommodation	Paved shoulder (min. 6')
Parking	No
Cross Street Intersections	Permitted. Stop sign control for cross street. Crossovers permitted at 1/2 mile spacing until frontage roads are constructed.
Curb Cut Access	Protect right-of-way for post 2010 construction of two-way frontage roads. Right in/right out until frontage roads are constructed.
Transit	Bus turnout and shelter. Express bus service and signal preemption potential.
Number of Traffic Signals per Mile	2, signals spaced 1/2 mile apart until frontage roads are constructed.
Signalization	Fully actuated.
Freight: Radii Vertical Clearance	WB-60; Standard New structures: 16'-3" Existing structures: 14'-6"
Railroads	Consider a grade separation at all railroads.
Loading	Off-street loading.

RURAL CROSS SECTION

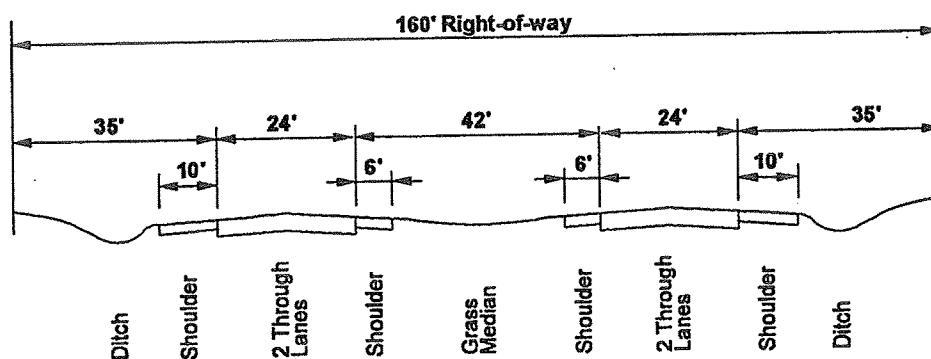


* Use a 74' wide median where there is a high probability of need for three lanes in each direction in the future

** Use a 6' wide ditch for detention storage and clear zone requirements

SRA Design Concept Report Cross Section

Due to adjacent prime farmland in the study corridor, the desirable rural cross section is proposed to be reduced to an agricultural preservation cross section which will reduce farmland acquisition by approximately four acres per mile.



Proposed Cross Section

Figure 2.4.1
Illinois Route 47

RURAL CROSS SECTION

2.5 Projected Travel Demand

The projected travel demand for 2010, resulting in forecast traffic volumes for this corridor, is taken from the regional travel demand forecasts by CATS. The forecasts are generated by the regional travel simulation model in coordination with IDOT and are predicated on all SRA's built out to the Design Concept Report standards. The travel demand is summarized in Figure 2.5.1.

The 2010 traffic forecast for the corridor varies from less than 5,000 vpd on the north end of the route to greater than 30,000 vpd north of Interstate 90. Projected traffic volumes south of Interstate 90 generally vary from 10,000 vpd to 20,000 vpd. These forecasts reflect the development characteristics and land use forecast along this route, with higher volumes projected in the vicinity of the development nodes.

The traffic forecasts did not take into account 1990 census data that shows higher than previously anticipated growth rates along the Illinois Route 47 corridor. In addition, traffic generated by the Prime Group Development north of Interstate 90 were not included in the traffic forecasts.

Several higher volume regional facilities cross the Illinois Route 47 corridor and reinforce its network identity as a facility to carry moderate to high volumes of regional traffic. These facilities are: US Route 30, Illinois Route 56, Interstate 88, Illinois Route 38, Illinois Route 64, US Route 20, Illinois Route 72, Interstate 90, Illinois Route 176, US Route 14, Illinois Route 120, and Illinois Route 173.

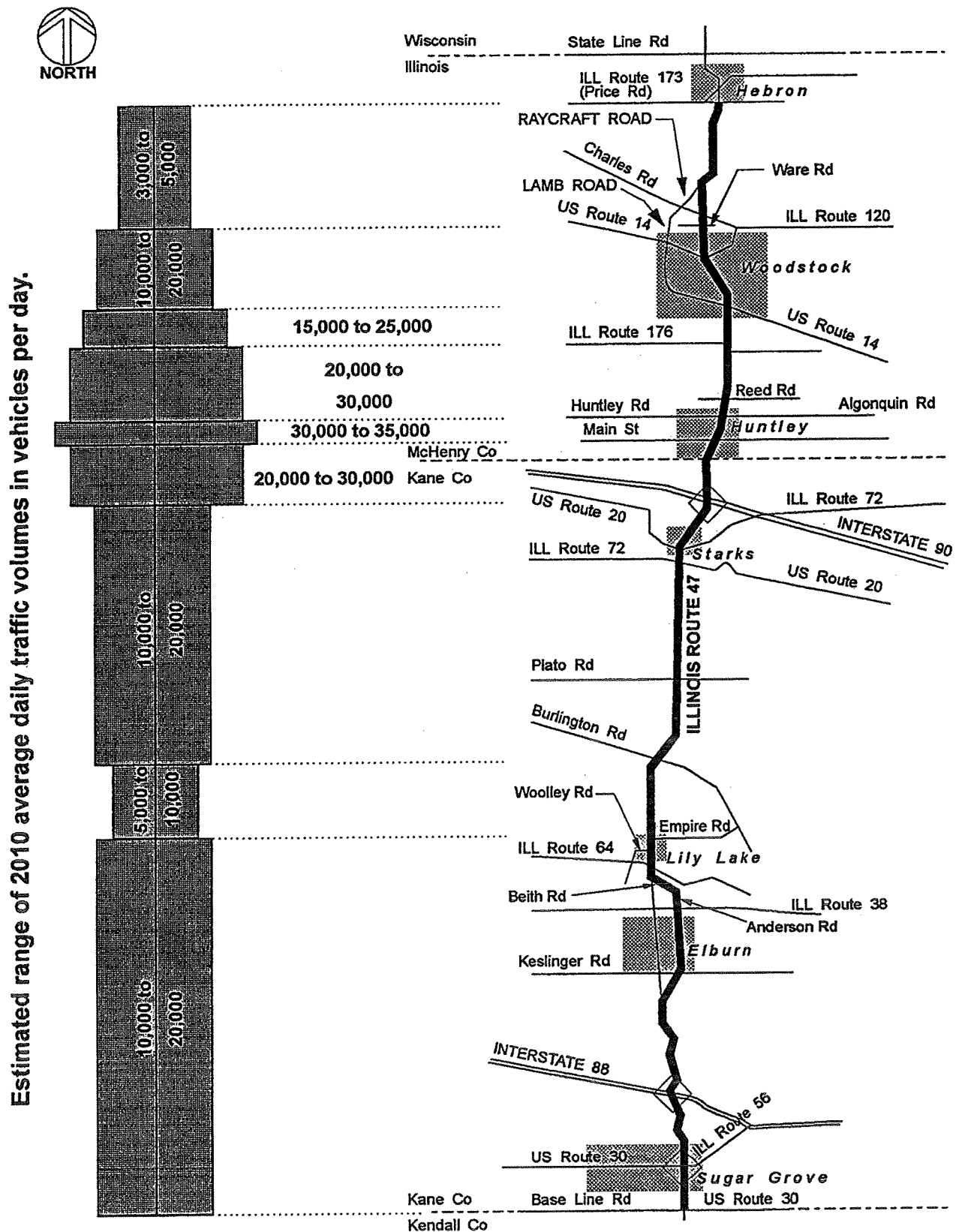


Figure 2.5.1
Illinois Route 47

PROJECTED CORRIDOR TRAFFIC VOLUMES